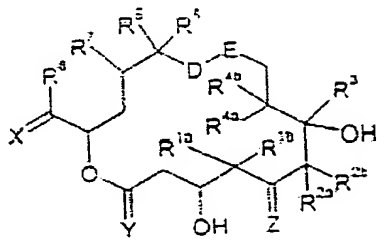
Listing of Claims:

1. (Previously amended) An epothilone compound of formula I,



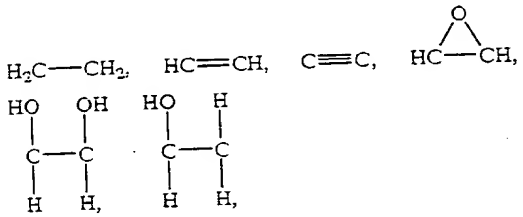
in which

R^{1a}, R^{1b} are the same or different and mean hydrogen, C_1-C_{10} alkyl, aryl, C_7-C_{20} aralkyl, or together a $-(CH_2)_m$ group with m = 2, 3, 4 or 5,

R^{2a}, R^{2b} are the same or different and mean hydrogen, C_1-C_{10} alkyl, aryl, C_7-C_{20} aralkyl or together a $-(CH_2)_n$ group with n = 2, 3, 4 or 5, whereby, if -D-E- stands for $-CH_2-CH_2-$ or Y stands for an oxygen atom, R^{2a} and R^{2b} cannot be hydrogen or methyl,

R^3 means hydrogen, C_1-C_{10} alkyl, aryl, C_7-C_{20} aralkyl,

R^{4a}, R^{4b} are the same or different and mean hydrogen, C_1-C_{10} alkyl, aryl, C_7-C_{20} aralkyl or together a $-(CH_2)_p$ group with p = 2, 3, 4 or 5,



D-E means a group

R^5 means hydrogen, C_1-C_{10} alkyl, aryl, C_7-C_{20} aralkyl,

R^6, R^7 each mean a hydrogen atom, together an additional bond or an oxygen atom,

R^8 means hydrogen, C_1-C_{20} alkyl, aryl, C_7-C_{20} aralkyl, which can all be substituted,

X means an oxygen atom, two alkoxy groups OR^{23}, a C_2-C_{10} alkylene-α,ω--dioxy group, which can be straight-chain or branched, H/OR^9 or a grouping $CR^{10}R^{11}$,

whereby

R^{23} stands for a C_1-C_{20} alkyl radical,

R^9 stands for hydrogen or a protective group PG^x,

R^{10}, R^{11} are the same or different and stand for hydrogen, a C_1-C_{20} alkyl, aryl, C_7-C_{20} aralkyl radical or R^{10} and R^{11} together with the methylene carbon atom together stand for a 5- to 7-membered carbocyclic ring,

Y means an oxygen atom or two hydrogen atoms,

Z means an oxygen atom or H/OR^{12},

whereby

R^{12} means hydrogen or a protective group PG^z.

2. **(Previously amended)** An epothilone compound of formula I according to claim 1, in which Y, Z, R^{1a}, R^{1b}, R^{2a} and R^{2b} all can have the meanings that are indicated in formula I, and the remainder of the molecule is identical to naturally occurring epothilone A or B.

3. **(Previously amended)** An epothilone compound of formula I according to claim 1, in which R^3, R^{4a}, R^{4b}, D-E, R^5, R^6 and R^7 all can have the meanings that are indicated in formula I, and the remainder of the molecule is identical to naturally occurring epothilone A or B.

4. **(Previously amended)** An epothilone compound of formula I according to claim 1, in which R^6, R^7, R^8 and X all can have the meanings that are indicated in formula I, and the remainder of the molecule is identical to naturally occurring epothilone A or B.

5.(**Previously amended)** An epothilone compound of formula I according to claim 1, in which Y, Z, R^{1a}, R^{1b}, R^{2a}, R^{2b}, R^3, R^{4a}, R^{4b}, D-E, R^5, R^6 and R^7 all can have the meanings that are indicated in formula I, and the remainder of the molecule is identical to naturally occurring epothilone A or B.

6. **(Previously amended)** An epothilone compound of formula I according to claim 1, in which Y, Z, R^{1a}, R^{1b}, R^{2a}, R^{2b}, R^6, R^7, R^8 and X all can have the meanings that are indicated in formula I, and the remainder of the molecule is identical to naturally occurring epothilone A or B.

7. **(Previously amended)** An epothilone compound of formula I according to claim 1, in which R^3, R^{4a}, R^{4b}, D-E, R^5, R^6, R^7, R^8 and X all can have the meanings that are indicated in formula I, and the remainder of the molecule is identical to naturally occurring epothilone A or B.

8.(**Previously amended)** A compound of formula I, namely

(4S,7R,8S,9S,13(Z),16S(E))-4,8-Dihydroxy-7-ethyl-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-5,5,9,13-tetramethyl-cyclohexadec-13-ene-2,6-dione,

(4S,7R,8S,9S,13E,16S(E))-4,8-dihydroxy-7-ethyl-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-5,5,9,13-tetramethyl-cyclohexadec-13-ene-2,6-dione (B),

(1S,3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-10-ethyl-8,8,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione ,

(1R,3S(E),7S,10R,11S,12S,16S)-7,11-dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-10-ethyl-8,8,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(1S,3S(E),7S,10R,11S,12S,16S)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-10-ethyl-8,8,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione ,

(1R,3S(E),7S,10R,11S,12S,16R)-7,11-dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-10-ethyl-8,8,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(4S,7S,8R,9S,13Z,16S(E))-4,8-Dihydroxy-7-ethyl-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-5,5,9,13-tetramethyl-cyclohexadec-13-ene-2,6-dione,

(4S,7S,8R,9S,13E,16S(E))-4,8-dihydroxy-7-ethyl-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-5,5,9,13-tetramethyl-cyclohexadec-13-ene-2,6-dione,

(1S,3S(E),7S,10S,11R,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-10-ethyl-8,8,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(1R,3S(E),7S,10S,11R,12S,16S)-7,11-dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-10-ethyl-8,8,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(1S,3S(E),7S,10S,11R,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-10-ethyl-8,8,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(1R,3S(E),7S,10S,11R,12S,16S)-7,11-dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-10-ethyl-8,8,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(4S,7R,8S,9S,13(Z),16S(E))-4,8-Dihydroxy-5,5,7,9,13-pentamethyl-16-((3-pyridyl)ethenyl)-1-oxa-cyclohexadec-13-ene-2,6-dione,

(4S,7R,8S,9S,13E,16S(E))-4,8-dihydroxy-5,5,7,9,13-pentamethyl-16-((3-pyridyl)ethenyl)-1-oxa-cyclohexadec-13-ene-2,6-dione,

(1S,3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-8,8,10,12,16-pentamethyl-3-((3-pyridyl)ethenyl)-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(1S,3S(E),7S,10R,11S,12S,16S)-7,11-dihydroxy-8,8,10,12,16-pentamethyl-3-((3-pyridyl)ethenyl)-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(4S,7R,8S,9S,13(Z),16S(E))-4,8-Dihydroxy-5,5,7,9,13-pentamethyl-16-((4-pyridyl)ethenyl)-1-oxa-cyclohexadec-13-ene-2,6-dione,

(4S,7R,8S,9S,13E,16S(E))-4,8-dihydroxy-5,5,7,9,13-pentamethyl-16-((4-pyridyl)ethenyl)-1-oxa-cyclohexadec-13-ene-2,6-dione,

(1S,3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-8,8,10,12,16-pentamethyl-3-((4-pyridyl)ethenyl)-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(1S,3S(E),7S,10R,11S,12S,16S)-7,11-dihydroxy-8,8,10,12,16-pentamethyl-3-((4-pyridyl)ethenyl)-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(4S,7R,8S,9S,13(E or Z),16S(E))-4,8-Dihydroxy-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-7-phenyl-5,5,9,13-tetramethyl-cyclohexadec-13-ene-2,6-dione,

(1(S or R),3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-10-phenyl-8,8,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(1R or S),3S(E),7S,10R,11S,12S,16S)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-10-phenyl-8,8,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(4S,7R,8S,9S,13(E or Z),16S(E))-7-Benzyl-4,8-dihydroxy-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-5,5,9,13-tetramethyl-cyclohexadec-13-ene-2,6-dione,

(1(S or R),3S(E),7S,10R,11S,12S,16R)-10-Benzyl-7,11-dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(1R or S),3S(E),7S,10R,11S,12S,16S)-10-Benzyl-7,11-dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,12,16-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(4S,7R,8S,9S,13(E or Z),16S(E))-4,8-Dihydroxy-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-5,5,7,13-tetramethyl-9-trifluoromethyl-cyclohexadec-13-ene-2,6-dione,

(1(S or R),3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,16-tetramethyl-12-trifluoromethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(1R or S),3S(E),7S,10R,11S,12S,16S)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,16-tetramethyl-12-trifluoromethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(4S,7R,8S,9S,11E/Z,13(E or Z),16S(E))-4,8-Dihydroxy-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-5,5,7,9,13-pentamethyl-cyclohexadec-11,13-diene-2,6-dione,

(1(S or R),3S(E),7S,10R,11S,12S,14E/Z,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,12,16-pentamethyl-4,17-dioxabicyclo[14.1.0]heptadec-14-ene-5,9-dione,

(1R or S),3S(E),7S,10R,11S,12S,14E/Z,16S)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,12,16-pentamethyl-4,17-dioxabicyclo[14.1.0]heptadec-14-ene-5,9-dione,

(4S,7R,8S,9S,13(E or Z),16S(E))-4,8-Dihydroxy-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-5,5,7,9,13-pentamethyl-cyclohexadec-13-ene-11-ine-2,6-dione

(1(S or R),3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,12,16-pentamethyl-4,17-dioxabicyclo[14.1.0]heptadec-14-ine-5,9-dione

(1R or S),3S(E),7S,10R,11S,12S,16S)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,12,16-pentamethyl-4,17-dioxabicyclo[14.1.0]heptadec-14-ine-5,9-dione

(4S,7R,8S,9S,13(E or Z),16S(E))-4,8-Dihydroxy-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-5,5,7,9-tetramethyl-13-trifluoromethyl-cyclohexadec-13-ene-2,6-dione,

(1(S or R),3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,12-tetramethyl-16-trifluoromethyl-4,17-dioxabicyclo[14.1.0]heptadeca-5,9-dione,

(1R or S),3S(E),7S,10R,11S,12S,16S)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,12-tetramethyl-16-trifluoromethyl-4,17-dioxabicyclo[14.1.0]heptadeca-5,9-dione,

(4S,7R,8S,9S,13(E or Z),16S(E))-4,8-Dihydroxy-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-13-pentafluoroethyl-5,5,7,9-tetramethyl-cyclohexadec-13-ene-2,6-dione,

(1(S or R),3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-16-pentafluoroethyl-8,8,10,12-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadeca-5,9-dione,

(1R or S),3S(E),7S,10R,11S,12S,16S)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-16-pentafluoroethyl-8,8,10,12-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadeca-5,9-dione,

(4S,7R,8S,9S,13(E or Z),16S(E))-4,8-Dihydroxy-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-5,5-(1,3-trimethylene)-7,9,13-trimethyl-cyclohexadec-13-ene-2,6-dione,

(1(S or R),3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8-(1,3-trimethylene)-10,12,16-trimethyl-4,17-dioxabicyclo[14.1.0]heptadeca-5,9-dione,

(1R or S),3S(E),7S,10R,11S,12S,16S)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8-(1,3-trimethylene)-10,12,16-trimethyl-4,17-dioxabicyclo[14.1.0]heptadeca-5,9-dione,

(4S,7R,8S,9S,11E/Z,13(E or Z),16S(E))-4,8-Dihydroxy-13-ethyl-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-5,5,7,9-tetramethyl-cyclohexadec-11,13-diene-2,6-dione,

(1(S or R),3S(E),7S,10R,11S,12S,14E/Z,16R)-7,11-Dihydroxy-16-ethyl-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,12-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadec-14-ene-5,9-dione,

(1R or S),3S(E),7S,10R,11S,12S,14E/Z,16S)-7,11-Dihydroxy-16-ethyl-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,12-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadec-14-ene-5,9-dione,

(4S,7R,8S,9S,11E/Z,13(E or Z),16S(E))-4,8-Dihydroxy-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-1-oxa-13-propyl-5,5,7,9-tetramethyl-cyclohexadec-11,13-diene-2,6-dione,

(1(S or R),3S(E),7S,10R,11S,12S,14E/Z,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-16-propyl-8,8,10,12-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadec-14-ene-5,9-dione,

(1R or S),3S(E),7S,10R,11S,12S,14E/Z,16S)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-16-propyl-8,8,10,12-tetramethyl-4,17-dioxabicyclo[14.1.0]heptadec-14-ene-5,9-dione,

(4S,7R,8S,9S,13(E or Z),16S(E))-4,8-Dihydroxy-16-(1-methyl-2-(2-pyridyl)ethenyl)-1-oxa-5,5,7,9,13-pentamethyl-cyclohexadec-13-ene-2,6-dione,

(1(S or R),3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-pyridyl)ethenyl)-8,8,10,12,16-pentamethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(1R or S),3S(E),7S,10R,11S,12S,16S)-7,11-Dihydroxy-3-(1-methyl-2-(2-pyridyl)ethenyl)-8,8,10,12,16-pentamethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(4S,7R,8S,9S,13(E or Z),16S(E))-4,8-Dihydroxy-16-(1-methyl-2-(4-pyridyl)ethenyl)-1-oxa-5,5,7,9,13-pentamethyl-cyclohexadec-13-ene-2,6-dione,

(1(S or R),3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(4-pyridyl)ethenyl)-8,8,10,12,16-pentamethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

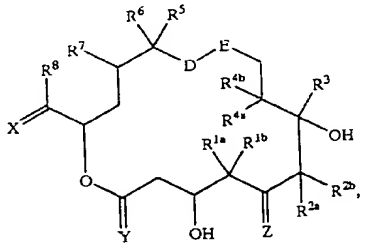
(1R or S),3S(E),7S,10R,11S,12S,16S)-7,11-Dihydroxy-3-(1-methyl-2-(4-pyridyl)ethenyl)-8,8,10,12,16-pentamethyl-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione,

(4S,7R,8S,9S,13(E or Z),16S(E))-4,8-Dihydroxy-16-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-5,5,7,9,13-pentamethyl-cyclohexadec-13-en-6-one,

(1(S or R),3S(E),7S,10R,11S,12S,16R)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,12,16-pentamethyl-4,17-dioxabicyclo[14.1.0]heptadec-9-one,

(1R or S),3S(E),7S,10R,11S,12S,16S)-7,11-Dihydroxy-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl)-8,8,10,12,16-pentamethyl-4,17-dioxabicyclo[14.1.0]heptadec-9-one.

9. **(Previously amended)** Process for the production of an epothilone compound of formula I according to claim 1

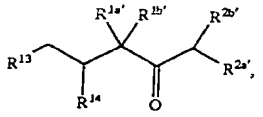


I ,

in which

the substituents have the meanings that are indicated in formula I,

wherein a fragment of general formula A



A ,

in which

$R^{1a'}$, $R^{1b'}$, $R^{2a'}$ and $R^{2b'}$ have the meanings already mentioned for R^{1a}, R^{1b}, R^{2a} and R^{2b},

$R^{1'}$ means CH_2OR^{13a}, CH_2-Hal, CHO, CO_2R^{13b}, COHal,

$R^{1'}$ means hydrogen, OR^{14a}, Hal, OSO_2R^{14b},

R^{13a}, R^{14a} mean hydrogen, SO_2-alkyl, SO_2-aryl, SO_2-aralkyl or together a $-(CH_2)_o$ group or together a $CR^{15a}R^{15b}$ group,

R^{13b}, R^{14b} mean hydrogen, C_1-C_{20} alkyl, aryl, C_1-C_{20} aralkyl,

R^{15a}, R^{15b} are the same or different and mean hydrogen, C_1-C_{10} alkyl, aryl, C_7-C_{20} aralkyl or together a $-(CH_2)_q$ group,

Hal means halogen,

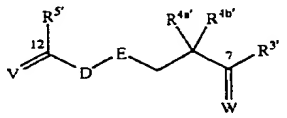
o means 2 to 4,

q means 3 to 6,

including all stereoisomers as well as their mixtures, and

free hydroxyl groups in R^{13} and R^{14} can be etherified or esterified, free carbonyl groups can be ketalized in A and R^{13}, converted into an enol ether or reduced, and free acid groups in A can be converted into their salts with bases,

is reacted with a fragment of general formula B



B

in which

$R^{3'}$, $R^{4a'}$, $R^{4b'}$ and $R^{5'}$ have the meanings already mentioned for R^3, R^{4a}, R^{4b} and R^5,

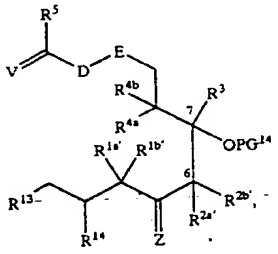
V means an oxygen atom, two alkoxy groups OR^{17}, a C_2-C_{10} alkylene- α,ω--dioxy group, which can be straight-chain or branched or H/OR^{16},

W means an oxygen atom, two alkoxy groups OR^{19}, a C_2-C_{10} alkylene- α,ω--dioxy group, which can be straight-chain or branched or H/OR^{18},

R^{16}, R^{18}, independently of one another, mean hydrogen or a protective group PG^1

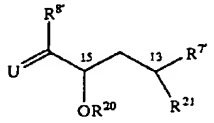
R^{17}, R^{19}, independently of one another, mean C_1-C_{20} alkyl,

to a partial fragment of general formula AB



AB ,

in which $R^{1a'}$, $R^{1b'}$, $R^{2a'}$, $R^{2b'}$, R^3, R^{4a}, R^{4b}, R^5, R^{13}, R^{14}, D, E, V and Z have the meanings already mentioned, and PG^{14} represents a hydrogen atom or a protective group PG, and this partial fragment AB is reacted with a fragment of general formula C



C ,

in which

$R^{8'}$ has the meaning already mentioned in general formula I for R^8, and

$R^{7'}$ means a hydrogen atom,

R^{20} means a hydrogen atom or a protective group PG^2,

R^{21} means a hydroxy group, halogen, a protected hydroxy group OPG^3, a phosphonium halide radical $PPh_3^+Hal^-$ (Ph = phenyl; Hal = F, Cl, Br, I), a phosphonate radical $P(O)(OQ)_2$ (Q = C_1-C_{10} alkyl or phenyl) or a phosphine oxide radical $P(O)Ph_2$ (Ph = phenyl),

U means an oxygen atom, two alkoxy groups OR^{23}, a C_2-C_{10} alkylene-α,ω--dioxy group, which can be straight-chain or branched, H/OR^9 or a grouping $CR^{10}R^{11}$,

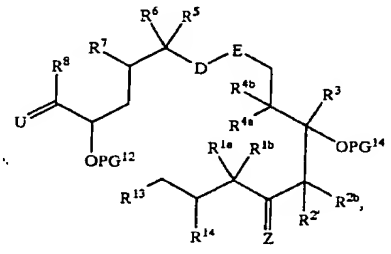
whereby

R^{23} stands for a C_1-C_{20} alkyl radical,

R^9 stands for hydrogen or a protective group PG^3,

R^{10}, R^{11} are the same or different and stand for hydrogen, a C_1-C_{20} alkyl, aryl, C_7-C_{20} aralkyl radical or R^{10} and R^{11} together with the methylene carbon atoms together stand for a 5- to 7-membered carbocyclic ring,

to a partial fragment of general formula ABC



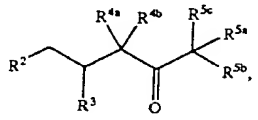
ABC ,

in which $R^{1a'}$, $R^{1b'}$, $R^{2a'}$, $R^{2b'}$, R^3, R^{4a}, R^{4b}, R^5, R^6, R^7, R^8, R^{13}, R^{14}, D, E, U and Z have the meanings already mentioned, and this partial fragment of general formula ABC is cyclized to an epothilone derivative of general formula I.

10. **(Previously amended)** A pharmaceutical composition comprising at least one compound of general formula I according to claim 1, as well as a pharmaceutically compatible vehicle.

11. **(Previously amended)** A method for the production of pharmaceutical agents.comprising mixing a compound of formula I according to claim 1, together with a pharmaceutically compatible vehicle.

12. **(Previously amended)** A process for the production of a compound of formula A



A,

in which

R^2 means CH_2OR^{2a}, CHO, CO_2R^{2b}, COX,

R^{2a}, R^{2b} mean hydrogen, C_1-C_{20} alkyl, aryl, C_7-C_{20} aralkyl,

R^3 means hydrogen, OR^{3a}, X, OSO_2R^{3b},

R^{3a} means hydrogen or together with R^{2a} a $-(CH_2)_n$ group or a $CR^{6a}R^{6B}$ group,

R^{3b} means C_1-C_4 alkyl, aryl,

X means halogen,

n means 2 to 4,

R^{6a}, R^{6b} are the same or different and mean C_1-C_8 alkyl, C_6-C_{10} aryl or together a $-(CH_2)_o$ group,

o means 3 to 6,

R^{6a} additionally can assume the meaning of hydrogen,

R^{4a}, R^{4b} are the same or different and mean hydrogen, C_1-C_{10} alkyl, C_7-C_{20} aralkyl or together a $-(CH_2)_m$ group,

m means 2 to 5

R^{5a}, R^{5b} are the same or different and mean hydrogen, C_1-C_{10} alkyl, C_7-C_{20} aralkyl or together a $-(CH_2)_p$ group,

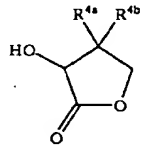
p means 2 to 5

R^{5c} means hydrogen,

including all steroisomers and mixtures thereof, and

free hydroxyl groups can be etherified or esterified in R^2 and R^3, free carbonyl groups can be ketalized in A and R^2, converted into an enol ether or reduced, and free acid groups in A can be converted into their salts with bases, wherein

a) a pantolactone of formula IIa or

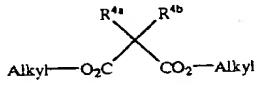


IIa

in which

R^{4a} and R^{4b} in each case are methyl groups or

b) a malonic acid dialkyl ester of formula XXVIII



XXVIII ,

in which

R^{4a}, R^{4b}, which have the meaning that is indicated in formula A, and alkyl, independently of one another, mean a C_1-C_{20} alkyl, C_3-C_{10} cycloalkyl ro C_4-C_{20} alkylcycloalkyl radical, is used as a starting product.

13. **(Withdrawn)**

14. **(Withdrawn)**

15. **(Withdrawn)**

16. **(Withdrawn)**

17. **(Withdrawn)**

18. **(Withdrawn)**

19. **(Withdrawn)**

20. **(Withdrawn)**

21. **(Withdrawn)**

22. **(Withdrawn)**

23. **(Withdrawn)**

24. **(Withdrawn)**

25. **(Withdrawn)**

26. **(Withdrawn)**

27. **(Withdrawn)**

28. **(Withdrawn)**

29. **(Withdrawn)**

30. **(Withdrawn)**

31. **(New)** The compounds of claim 1, in which

R^{2a}, R^{2b} are the same or different and mean hydrogen, C_1-C_{10} alkyl, aryl, C_7-C_{20} aralkyl or together a $-(CH_2)_n$ group with n = 2, 3, 4 or 5,

whereby, if -D-E- stands for

$-CH_2-CH_2-$ or Y stands for an oxygen atom, then R^{2a} and R^{2b} cannot be hydrogen or C_1-C_{10} alkyl.